THE Soybean Digest

Official Publication

OF

THE AMERICAN SOYBEAN ASSOCIATION

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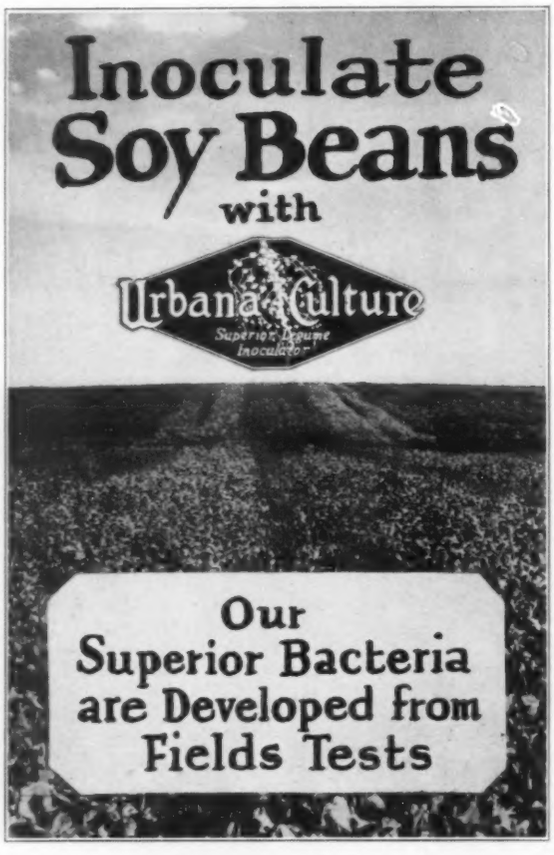

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THE URBANA LABORATORIES
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THE *Soybean Digest*

VOL. I — APRIL · 1941 — No. 6

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Market Summary

SOYBEANS

Chicago Futures	April 10	Month Ago
May	1.17¾	97
July	1.14½	94¼
October	1.08½	....

(Quotations from Roesling, Monroe and Company)

SOYBEAN OIL

	April 10	Month Ago
Tanks, Midwest mills	7½-⅝c	5⅝-¾c

(Quotation from Sterne & Son Co.)

SOYBEAN OIL MEAL

	April 10	Month Ago
Basis Decatur, ton	$23	$23.25

(Quotations from Zimmerman Alderson Carr Company)

Soybean prices followed skyrocketing oil prices in the past month, and prices were still on the upturn as *The Digest* went to press. When soybean prices hit $1 at the farm March 26, the Agricultural Marketing Service reported that more beans moved from the producers' hands than on any previous day of the crop year. The soybean oil meal market, while showing firmness, did not follow the rising soybean prices. Prospective shipments of lard and food products to Great Britain under the Lend-Lease Act, coupled with rising consumer demand, was credited for the rise in oil prices.

Professional Directory

Brokers, chemists and all classes of professional men with an interest in the soybean industry are invited to list their firms in the professional directory of *The Soybean Digest*, official publication of The American Soybean Association.

Rates furnished upon request.

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Books and Bulletins

THE BIOCHEMISTRY OF SYMBIOTIC NITROGEN FIXATION, *by Perry W. Wilson,* associate professor of agricultural bacteriology at the University of Wisconsin (302 pp., ill., The University of Wisconsin Press, 1940. $3.50.) Since only 2 percent of the nitrogen returned to the soil annually is inorganic nitrogen, nitrogen-fixing bacteria merit intensive study to increase the amount of nitrogen they take from the air and add to the soil, says the author. The book then proceeds to summarize and collect present knowledge of the biochemistry of the bacteria, the interaction of host and bacteria, fixation of nitrogen by bacteria and plant, the carbohydrate-nitrogen relationship in symbiotic nitrogen fixation, excretion of nitrogenous compounds by legumes, the chemical mechanism of the fixation process and the physical-chemical characteristics of the enzyme system. In the closing chapters the author discusses some practical applications and suggests problems research may solve in the near future. The book is a sequel to THE ROOT NODULE BACTERIA AND LEGUMINOUS PLANTS, *by E. B. Fred, I. L. Baldwin and Elizabeth McCoy,* published by the University of Wisconsin Press in 1932.

SOYBEAN PRODUCTION IN IOWA, *by E. S. Dyas* (Bulletin P30, Iowa Agricultural Experiment Station and Agricultural Extension Service; 16 pages). Mukden, Manchu, Dunfield and Illini varieties are recommended for Iowa. Planting time should be soon after corn, in a well prepared seedbed. Complete information on planting, cultivating and harvesting in Iowa are given.

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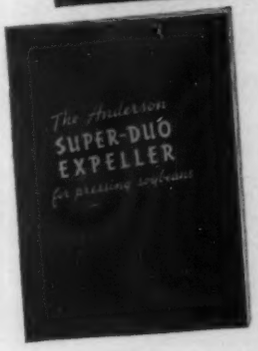

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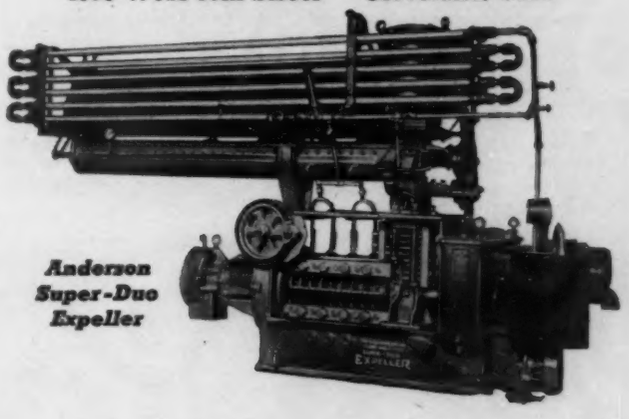

Anderson Super-Duo Expeller

World Production Increases in 1940

Gains in Manchurian and European Production Offset Losses in the United States; Trade Drops

PRELIMINARY information from countries reporting the 1940 soybean harvest indicates that total production was about 2 percent above the previous year, according to estimates received by the Office of Foreign Agricultural Relations. The crop in the United States was about 11 million bushels smaller and in Europe about 1 million bushels larger than in 1939. In Manchuria, official estimates indicate a 1940 crop slightly smaller but reliable trade sources place the production at approximately 15 million bushels larger than the small 1939 harvest. The crop in China was somewhat above the short 1939 harvest and was the largest in the past 4 years.

Trade at Low Level

Total international trade in soybeans and soybean oil during 1940-41 (October-September) is expected to continue at a low level similar to that of the past season. Manchurian exports of soybeans and oil are expected to be somewhat larger than last year, while the United States shipments abroad will be much smaller. As to the importing countries, Japan will probably obtain the largest quantity, as in 1939-40. Germany, normally the largest soybean importer, hopes to secure as much as 15 million bushels during the 1940-41 season from Manchuria and European countries. Imports by other European countries are likely to be small.

Carryover Small

Carry-over of soybeans on Oct. 1, 1940, was relatively small in the exporting countries, and in the importing countries it was smaller than a year earlier, especially in Japan and Germany. In the other European countries stocks have been small for the past two seasons.

Prices for soybeans in the United States this season are averaging slightly lower than a year ago, while in Manchuria the Government monopoly is paying about 24 cents per bushel above last year. It is reported that last season the Manchurian farmers withheld a considerable proportion of their beans from the market because of the low purchase price. The Manchurian price for No. 1 grade mixed beans ex Dairen up to Jan. 31, 1941, was about $1.04 per bushel.

The European war substantially reduced the international trade in soybeans and bean oil during the 1939-40 marketing season (October-September) as compared with previous years. A total of about 40 million bushels entered foreign trade during the marketing year as compared with 80 million during the 1938-39 season. In addition, international trade in soybean oil during 1939-40 amounted to approximately 55,000 short tons as compared with 80,000 short tons in 1938-39.

Export Markets Closed

Exports of soybeans and soybean oil from the United States are expected to be much smaller during the current season as compared with the 1939-40 marketing year, when shipments abroad amounted to 11 million bushels of soybeans and 18 million pounds of oil. Last season, heavy purchases of American soybeans were made by European countries before the war broke out and later in the fall months, due to the existing shortage. The trade this season with these countries is almost entirely closed except with the United Kingdom and thus far there appears to be no demand from this market for beans or oil. The largest exports of soybean oil last year were made primarily to Cuba, Finland, and Switzerland. Cuba is purchasing smaller quantities this season, and exports to European countries are expected to be small.

The Manchurian soybean harvest for 1940 amounted to 141 million bushels as compared with 145 million bushels for the previous year, according to the official estimates. Trade sources in Manchuria, however, believe that the 1939 crop was over-estimated and that the harvest was one of the smallest in many years, amounting to only about 125 million bushels. Trade sources place the 1940 crop at 140 million bushels.

Manchurian Acreage Drops

The 1940 planted acreage was placed at 9,459,000 acres as compared with 10,287,000 in 1939. The 8 percent reduction in acreage was the result of several factors such as, (1) the reluctance of farmers to plant a crop for which they considered the official price too low; (2) shortage of human and animal labor and the high cost of wages; and (3) lack of moisture during the early part of the planting season.

The supply of Manchurian soybeans available for export during the 1940-41 marketing season is reported to be larger than last season and is estimated at 35 to 40 million bushels. It is expected that Japan will again obtain the largest proportion of these exports. Shipments to Germany may be somewhat larger this season, as it is reported that a German-Manchoukuo trade pact last September called for the exportation to that country of 11 million bushels of soybeans. It is expected that shipments will be made across Siberia and it is possible that some of this quantity may be taken in the form of oil. Recent information indicates that Japanese authorities are encouraging soybean-oil processing at Harbin and Hsinking and a reduction at Dairen.

Chinese Crop Larger

The 1940 soybean crop in China was above the previous year as the result of more favorable growing weather, especially in North China where the harvest had been short during the 2 preceding years. Although China is the largest soybean producer, it is generally a net importer, obtaining small quantities of beans and oil from Manchuria.

In the Danube Basin the 1940 production continued the upward trend begun several years ago. German companies operating in most of these countries guaranteed prices to growers before planting. The bulk of the exports from these countries has usually gone to Germany. About 80 percent of the Rumanian production was in Bessarabia, the area ceded to the Soviet Union, and it is not known how much of the production this season has been shipped to Germany.

SOYBEANS: PRODUCTION IN SPECIFIED COUNTRIES — 1935 TO 1940

Country	1935	1936	1937	1938	1939*	1940*
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
China**	184,415	215,728	213,189	207,600	203,900	216,800
Manchuria	141,793	152,375	159,907	157,445	144,952	140,617
United States	44,378	29,983	45,272	62,729	91,272	79,837
Chosen	20,738	17,937	20,205	18,333	†	†
Japan	10,719	12,485	13,473	†	†	†
Taiwan	139	162	158	146	†	†
Netherlands Indies	7,448	9,090	9,880	10,567	†	†
Rumania	424	1,367	2,584	1,803	3,532	‡ 3,600
Bulgaria	†	179	419	246	613	1,415
Yugoslavia	36	22	54	140	103	294
Hungary	†	†	†	†	125	194
TOTAL §	410,500	439,700	466,000	473,000	477,500	483,500

Compiled from official sources and reliable estimates.

* Preliminary.

** Excluding Kwangsi Province for 1935 to 1937 which normally produces about 2,500,000 bushels.

† Not available.

‡ Assuming Bessarabia produces 80 percent of the total.

§ Includes a small amount for other minor producing countries but excludes the Soviet Union.

Soybeans Draw Heavily on Minerals

Good Crop Uses as Much Phosphorus as 60-Bushel Corn Crop, Twice as Much as 30-Bushel Wheat Crop

By H. R. Smalley, Director Soil Improvement Work, National Fertilizer Association

ONE of the results of the doubling of the commercial acreage of soybeans during the past 4 years has been a greatly increased interest in the use of fertilizers on this crop.

The soybean crop is a rather heavy consumer of plantfood, particularly of the minerals. For example, a 30-bushel wheat crop uses about 20 pounds of phosphoric acid and about 30 pounds of potash; a 60-bushel corn crop uses about 35 pounds of phosphoric acid and about 70 lbs. of potash; while a 25-bushel soybean crop uses 40 pounds of phosphoric acid and 60 pounds of potash. In other words, a good crop of soybeans uses about twice as much phosphoric acid and potash as a good wheat crop, and about the same amount of these two plantfoods as a 60-bushel crop of corn. According to Dr. O. H. Sears of the University of Illinois, the soybean crop requires considerably more calcium and somewhat more magnesium than comparable yields of corn, oats, and wheat.

Neutral Soil Best

We have been accustomed to think of the soybean as an acid soil crop, but reliable evidence now available indicates that this is perhaps not true, or at least only true in part. Experiments at the Ohio Agricultural Experiment Station indicate that for best results soybeans require about the same soil reaction as clover or alfalfa, that is about pH 6.5 to 7. It may be that soybeans can stand more acidity than clover and alfalfa, but even so, calcium and magnesium are very necessary.

Probably a great many farmers are under the impression that the soybean is a soil-improving crop; that it adds to the fertility of the soil. This is only true when the whole crop is plowed under, and even then the only addition to the soil is the nitrogen obtained from the air and the organic matter. In this connection I quote a statement by Dr. T. B. Hutcheson, agronomist at the Virginia Agricultural Experiment Station:

"There are no crops that do not use plantfood and all crops are soil-depleting unless returned *in toto* to the soil. Certain crops because of their habits of growth and their place in the rotation reduce erosion and leaching. Legumes, when inoculated, may gather nitrogen in amounts in excess of their own needs, but in doing so they use mineral elements in large quantities. These have been called 'soil-improving' and 'soil-conserving' crops. Both terms are misleading unless qualified."

How to Fertilize?

The next question is, how can plantfoods best be supplied to the soybean crop? This question cannot be answered with entire satisfaction at present. A number of experiments that have been conducted during the past 25 years or so indicate (1) that soybean yields are much higher on good soils than on poor soils; and (2) that when soybeans are grown in crop rotations in which one or more of the other crops in the rotation is fertilized, yields of soybeans are increased substantially even though no fertilizer may have been applied to the soybean crop.

For example, at the Indiana Agricultural Experiment Station, in a corn, soybean, wheat and hay rotation, in which the corn and wheat received fertilizer, the yield of soybeans was increased an average of 6 bushels per acre during the last 9 years of the experiment. The corn yield was increased by 27 bushels and the wheat yield by 13 bushels.

Delaware Reports Increase

At the Delaware Experiment Station, soybeans have been grown in a corn, soybean, wheat and hay rotation, and the fertilizer applications divided between the corn, soybean and wheat crops. In this experiment, the average yield of soybeans for 21 years has been 12 bushels without fertilizer and 21 bushels on the plot receiving superphosphate and potash. In this experiment, however, there is no way of determining how much of the increase in the soybean yield may have been due to the residual effect of fertilizers used on other crops and how much has been due to direct application of fertilizer to the soybeans.

Experiments conducted on four county experiment farms in Ohio for periods of 13 to 16 years have shown increases from the use of phosphoric acid and potash in a 4-year rotation of corn, soybeans, wheat and clover amounting to 12 bushels corn, 2.8 bushels soybeans, 9.4 bushels wheat, and 580 pounds of clover hay per acre.

It is well-known that soybean seeds are more easily injured by contact with fertilizer than most crops. For this reason, when soybeans are planted with an ordinary grain drill the fertilizer should not be applied at the same time. It can, however, be drilled in a separate operation before planting and it is probably best to drill the fertilizer at right-angles to the bean rows.

Corn Planters Adapted

Most corn planters are now equipped to apply fertilizer in bands at the sides of the row and may therefore be used with safety for planting and fertilizing soybeans when cultivation is desired. There is also on the market a bean and beet drill that applies fertilizer at one side of the row and which should be entirely satisfactory for soybeans.

As a result of a conference which was held in Chicago in December between agronomists and farm machinery manufacturers, it is expected that a number of new experiments will be started during the coming season to determine the best methods of fertilizing soybeans.

—sbd—

Minor Elements Not Necessary in Ohio

"Deficiencies of minor elements, manganese, zinc, copper and boron, are not common in general farming in Ohio," asserts E. E. Barnes of the agronomy department of the Ohio Agricultural Experiment Station at Wooster.

"In 1936, an experiment was started at the Ohio Station to test the response of crops to several of these minor elements. Sulfur and magnesium were included in the tests as well as the elements named above, although they are not minor elements in the sense the others are, since they have been recognized as necessary to plants for a long time.

"To date, five crops have been grown on these plots. The first crop was corn, followed by oats, wheat, clover, and in 1940, soybeans. So far, these minor elements have not increased crop yields."

Ohio Test Plots Favor Soybean Fertilization

In 1940 soybean test plots on the Ray E. Rowland farm, Pickaway County, Ohio, duplications of three varieties showed a positive response to fertilization, and two showed slight negative responses. The average yield of all fertilized plots was 45.6 bushels per acre, however, as compared to 40.5 for the unfertilized plots. The beans were grown on excellent soil and harvested by hand, which accounts for the unusually high yields for 1940.

Twenty percent superphosphate, applied at the rate of 175 pounds per acre, was the fertilizer used. The plots contained 1.7 acres and were seeded at the rate of 2 bushels per acre. All seed was inoculated. Mandell, Dunfield, Illini, Richland and Mingo varieties were each seeded with and without fertilization.

These results should not be taken as conclusive, however, for they are only from a 1-year test, under unusual weather conditions. This point was emphasized strongly by the sponsors of the test, F. K. Blair, county agricultural agent and Donald B. Walker, manager of the grain department of Purina Mills at Circleville, Ohio.

● *Pictures at right portray the Soybean Special in action at Bowling Green, Ohio. The staff appear in the top photo, and, from left to right, are: K. D. Burnham, electrician; W. C. Hall, secretary to Mr. Quivey; C. B. Stewart, Wood County Agricultural Agent, Bowling Green, Ohio; Earl Jones, extension agronomist, Ohio State University; Miss Alma Garvin, nutrition specialist, Ohio State University; O. K. Quivey, manager agricultural development department, Baltimore and Ohio Railroad, in charge of The Soybean Special; L. J. Miller, agricultural agent, B. and O. Railroad, Columbus, Ohio; Aneta Beadle Vogler, Indianapolis, Ind., in charge of soybean cooking school; Miss Mary Mowry, Indianapolis, Ind., assistant to Mrs. Vogler; C. K. Shuman, research assistant, Ohio Experiment Station; D. F. Beard and E. P. Reed, extension agronomists, Ohio State University.*

In the small inset, C. K. Shuman (at left) answers questions of two visitors in the exhibit car, which is illustrated in the bottom photo; in the center picture is a view of the men's lecture car, where D. F. Beard was giving his address on "Fitting Soybeans Into the Farming System." Another picture, showing Mrs. Vogler and Miss Mowry in action at the cooking school, appears in the "Soybeans . . . and People" section, page 10.

Soybean Special Ends Three-State Tour

By O. K. Quivey

Agricultural Development Department
Baltimore and Ohio Railroad

THE SOYBEAN SPECIAL, operated by the Baltimore and Ohio and Alton Railroads in cooperation with Ohio State University, Purdue University, the University of Illinois and The American Soybean Association, April 2 completed a 6-weeks' pilgrimage through the Corn Belt, operating 2 weeks in each of the states of Ohio, Indiana and Illinois.

During its pilgrimage the Special made 51 stops and was visited by 19,558 people, or an average of 383 per stop. The exhibit and two lecture cars, taxed to their capacity most of the time and usually repeating the program several times at each stop to accommodate the visitors, indicated the public's interest in the soybean.

The Soybean Special went the full way in giving information regarding the best adaptable varieties and seed sources, seedbed preparation, planting, cultivating, harvesting, rotation, marketing, processing and utilization. Significant was the variety of intelligent questions asked by adult growers during the question and answer period, following each lecture program. Equally significant was the interest shown by large groups of vocational agricultural students and their instructors.

Cooking School

One of the outstanding features of the Special was the program provided in the women's lecture and exhibit car, in charge of Aneta Beadle Vogler, formerly nutrition specialist for Purdue University and especially engaged by the Baltimore and Ohio for the purpose of presiding over the women's lecture program. Mrs. Vogler, ably assisted by Miss Mary Mowry, an outstanding Indiana 4-H Club girl, conducted a soybean cooking school and, following a general discussion of soybean products in the diet, demonstrated three specific recipes — soybean loaf, soybean muffins and soy fudge. These dishes, as they emerged hot from the gas range, were served to the women and high school Home-Ec girls in attendance. One thousand and twenty-three muffins were made and served in the women's car and hundreds of prizes — all soybean food products such as soy flour, canned green soybeans, soy pancake and muffin flour, roasted salty soys, etc. — were presented to women visitors during the tour of the Special.

One of the features of the Special was the sound picture "The Story of the Soybean," made by Erpi Studios in cooperation with Dr. W. L. Burlison, University of Illinois.

The program of the Soybean Special was broadcast from aboard the train by four different radio stations, including WLW Cincinnati, CKYW Cincinnati, WMBD Peoria and WDZ Tuscola. As a result, the four stations and the Agricultural Development Department of the Baltimore and Ohio Railroad have been deluged with postcard requests for more information regarding the soybean and particularly for copies of the B&O's booklets "Soybean Recipes" and "That Magic Plant, the Soybean."

Crop Failures Traced to Three Causes

Edmondson Outlines Successful Growing Methods To National Farm Chemurgic Council Audience March 28

MOST soybean crop failures can be traced to one or a combination of three causes, said J. B. Edmondson, secretary of the American Soybean Association, in discussing the grower's viewpoint of soybean production at the National Farm Chemurgic Council meeting March 28 in Chicago, Ill. Edmondson drew upon 27 years experience in soybean cultivation as a basis for his talk. A poor stand, weeds and harvesting difficulties were the three causes listed for crop failures.

"Strong, germinable seed, sufficiently heavy seeding, early plowing, carefully prepared seed bed and, lastly, an abiding faith that it won't rain for a few days" were the points emphasized as means of obtaining a good stand.

Germination Bad

Germination of soybean seed has been particularly bad of late years, and many thin stands have resulted from failure to know the germination of the seed and to increase accordingly the rate of seeding to offset the weak and dead beans, he stated.

It's just as important to plow the soybean ground early as it is the corn ground, Edmondson noted, saying that on his own farm they had long since abandoned the practice of waiting until corn planting was out of the way before starting on the soybean ground. After the plowing is done, whatever operations are necessary to pulverize and level the soil and to kill all weeds, should be done without reserve. This conserves moisture and aids in germination, he explained. The disc and drag, used liberally, are simple but effective implements.

Edmondson prefers row to solid planting, particularly if intended for the combine: "I have observed many times that soybeans will germinate more quickly and come up more evenly if planted with a corn planter, beet drill or similar implement that controls accurately the depths of planting and that packs the soil around the seed with the wheel. This method is in contrast to the use of the wheat drill where the seed is sown loosely in the soil. This difference is particularly noticeable in a dry seed bed."

Break Crust

"Heavy rainfalls soon after planting which crust or puddle the soil is a common cause for worry; for soybean seedlings cannot lift themselves through hard or crusted ground. When this condition develops, the rotary hoe will do the job if the ground is merely crusted; however, if the soil is badly run together, the rotary hoe is useless. To meet such an emergency on one occasion, I had to resort to the tractor and disc in an effort to help the seedlings through. This method was indeed drastic, but it was at least effective, for, although many of the seedlings lost their heads, those that did escape the disc came through in good condition and produced a satisfactory crop," Edmondson related.

A thick, even stand is also the first step in keeping down the weeds. "A poor stand invites all sorts of weeds to come in, and they are not slow to respond," Edmondson observed, comparing a weedy field of soybeans to "an ornery, lousy, runt pig." He warned against too early seeding, as it greatly increases the weed hazard. The latter half of May is a good time to plant soybeans in the latitude of central Indiana, from the standpoint of weed control, he noted. Early plowing, in addition to helping obtain a good stand, helps with weed control, as does planting in rows which permits heavy cultivation.

Weather is the most difficult factor in harvesting, but other points, more in the control of the operator, are factors also, according to Edmondson. A satisfactory harvest presumes the use of adapted varieties, neither too early nor too late, and also that thorough inoculation was provided. "It is at harvest time that one appreciates the advantages of clean cultivation. A soybean field infested with heavy weeds is a difficult problem for the combine and often harvesting has to be delayed until after the frost kills the weeds before combining can be done. Such delays are full of grave risk," he stated.

Selection of a variety with good growing habits that matures well ahead of the frost and adjustment of the combine to do a perfect job of threshing were other points emphasized in overcoming harvesting difficulties.

"Before any combining is done, the pods should at all times be dry enough to release their seed readily on being pressed between the finger and thumb. Failure to observe this precaution is usually responsible for the heating in the bin that sometimes takes place. I have never had beans heat in the bin after harvesting if they were dry enough in the field to combine properly," Edmondson said.

Food Industries Use More Soybean Oil

USE of soybean oil in food products reached an all-time high of 339,403,000 pounds in 1940, United States Bureau of Census figures released in March revealed. This compares with 304,766,000 pounds used in edible products in 1939.

Despite this absolute increase in total poundage going into edible channels, the percentage of the year's soybean oil production so used declined from 67 percent in 1939 to 63 percent in 1940, probably because of an increased amount of soybean oil used in paints, varnish and other industrial uses.

Most important single outlet in 1940 was shortening. Although consumption of vegetable shortenings declined 209,895,000 pounds from 1939's mark of 1,406,318,000 pounds, use of soybean oil increased from 201,599,000 pounds in 1939 to 212,317,000 pounds in 1940. It was the only major fat or oil used in shortening to show an increase in poundage used despite the curtailed production.

Margarine was the second most important outlet for soybean oil, 87,106,000 pounds going into 1940 margarine production as compared with 70,822,000 pounds in 1939. Gains of soybean oil in shortening were largely at the expense of palm oil, an imported oil, while gains in margarine were at the expense of coconut and babassu oils, also imported.

In the table below appear the principal ingredients, with amounts used, of vegetable oil shortenings and margarine, and amounts going into other edible products.

OILS AND FATS USED IN SHORTENING, MARGARINE AND OTHER EDIBLE PRODUCTS

	Shortening		Margarine		Other Edible Products	
	1940	1939	1940	1939	1940	1939
			(Thousands of Pounds)			
Cottonseed Oil	823,359	904,950	115,947	98,657	263,323	233,442
Peanut Oil	22,516	51,713	1,728	2,445	9,743	8,678
Cocoanut Oil	17,576	20,659	21,783	38,516	54,689	43,931
Corn Oil	746	1,453	419	489	70,956	65,384
Soybean Oil	212,317	201,599	87,106	70,822	39,980	32,345
Palm-kernel Oil	1,146	266	.....	473	4,772	5,292
Rapeseed Oil	.....	37	.....	.....	.....	.....
Palm Oil	33,224	113,078	4	1	3,081	1,352
Sesame Oil	24	724	.....	.....	1,133	1,102
Babassu Oil	381	506	6,148	13,944	5,759	8,459
Tallow, Edible	39,595	56,671	.....	69	4,777	3,483
Fish Oils	10,902	20,321	.....	.....	.....	.....
Other Oils & Fats	34,638	34,341	22,818	16,289	22,164	18,787
TOTAL	1,196,424	1,406,318	255,953	241,705	480,378	426,053

THE Soybean Digest

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GEO. M. STRAYER, Editor — J. W. TOWNSEND, Managing Editor

VOL. I · NO. 6

UNITED STATES farmers will reduce soybean acreage by 7 percent in 1941, according to March 1 intentions-to-plant crop reports — thus is broken a 5-year trend of rapidly increasing soybean acreage extending from 1936 to 1941.

The forecast did not come as a surprise to most men in the soybean industry. Low yields, adverse harvesting conditions and low prices were fresh in the minds of many an "in-and-out farmer," to be contrasted with a relatively favorable year for oats and corn, both of which compete heavily with soybeans for crop acres. Perhaps the surprise element is that intended acreage hasn't been cut more.

In short, the soybean industry finds itself facing the new season with a critical situation on its hands. Is this acreage cut a sign that the industry is "slipping?" With the AAA taking the brakes off corn and hog production, with new varieties making a comeback for the oats crop and hybrid corn enhancing the comparative profit of that crop, will soybeans be able to maintain their newly established position as a staple farm crop?

The fate of the soybean industry, in the final analysis, rests with the rank and file of the farmers. What avail are the long hours of lights shining through the windows of the research laboratory, if the farmers won't grow the crop? And their decision is not made by listening to dramatic tales of shining new plastic cars made from soybeans, but by a long, hard, X-ray look into their pocketbooks.

Thus recognizing the importance of keeping the crop profitable to the producer, an analysis of the price structure of the soybean market reveals that this can logically be done in only one way — cutting costs of production. The other end, higher prices for soybeans, is chained to the ceiling of a highly competitive field for fats and oils and for protein concentrates such as soybean meal. The only way we could raise prices of soybeans would be to cut production so drastically that the entire oil production of the nation — lard, cottonseed, linseed and peanut oils — would be noticeably reduced. Even this would have only a limited effect, for with a slight rise in price, millions of pounds of imported oils would begin pouring over tariff walls.

Turning to the other alternative of cutting production costs, inherently a program of prosperity by abundance rather than scarcity, what opportunities do we find? Unquestionably they appear great.

Here again we find two lines of attack possible: the development and selection of new and better varieties, and the use of better cultural practices. The program of soybean hybridization to produce better varieties is gathering momentum in our state agricultural experiment stations and an enormous amount of work in this line is being done by the United States Regional Soybean Industrial Products Laboratory. Little doubt exists but that this work will produce improvements in soybean varieties comparable to the strides made in oats and wheat varieties in recent years, and in the hybrid seed corn development.

But hybridization, followed by several seasons of selection, with no guarantee even then that a superior variety will be found, requires many seasons of work, and we can look for little help, this year or next, or even the year after that, from new varieties still in our research greenhouses.

Thus our immediate hope, by a long process of elimination, lies inescapably in better cultural methods. That great progress has been made in this direction is evident from the growth in average per acre yields from 1924 to 1939 — from less than 11 bushels per acre to more than 20. But while the average yield in 1939 was around 20 bushels per acre, yields of 35 and 40 bushels per acre were common.

Soybeans are a relatively new crop for the great majority of our farmers. The many intricate problems of production — how to fit them into the rotation, how to seed and cultivate, how to harvest and store the beans without disastrous delays from rains and unseasonable fall weather — can not be learned over night.

But as surely as they are learned, and the improvements being found annually by our experiment stations disseminated among the rank and file of the farmers, the soybean industry will be upon a firm foundation, and even the most skeptical will admit, "The soybean is here to stay."

Geo. M. Strayer

THE AMERICAN SOYBEAN ASSOCIATION

President.....G. G. McIlroy, Irwin, Ohio
Vice President.....David G. Wing, Mechanicsburg, Ohio
Secretary-Treasurer.....J. B. Edmondson, Clayton, Indiana
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You Get Both { Low Price / Long Experience

in This Better-Built Combine for

SOY BEANS

If you have BOTH soybeans and small grains, this Case Model F combine is the type to fit your farm because it is built from the beginning for BOTH. It takes a 54-inch swath. What's more important, it has capacity to take care of what it cuts . . . capacity to thresh, separate, and clean the seed . . . even in heavy, tough, tangled crops. The "F" gives you capacity where it counts . . . and gives it to you at a low price.

To do BOTH calls for special skill and experience. Case has been building grain-saving machines for 98 years. Whether you choose the "F", the six-foot "A-Six", or one of the 8, 10, or 12-foot Case combines, you get the benefit of the longest and broadest world-wide experience in saving every sort of threshable crop. In any size you get a cylinder properly proportioned for first-class work BOTH from the windrow and in standing crops. See your Case dealer about them.

You Get More for the Money in Any Case Machine

In Case bean-and-beet planters, narrow-row cultivators, and Seedmeter drills you will find features of extra value for soybean culture, yet they cost no more. Case Centennial plows and Power-Control disk harrows prepare better seedbeds with less time and bother. Ten new models of Flambeau Red Case tractors offer fast, low-cost power for every type and size of farm. Write for free folder on any machines that may interest you. J. I. Case Co., Racine, Wis.

CASE

SEE THEM AT YOUR NEAREST CASE DEALER

PLAIN TALK ABO

● Let's think straight about inoculating soy beans.

First, when soy beans are well inoculated . . . and have plenty of nodules on the roots . . . they build up the soil, produce bigger yields and make richer feed than when not inoculated. *Leading growers know this . . . so do County Agents, State Agricultural Colleges and the U. S. Department of Agriculture.*

Second, you can't afford *not* to inoculate your soy beans at every planting. Even though you have grown inoculated beans on a certain field the year before, you can't be sure the bacteria in the soil will thoroughly and uniformly inoculate this year's crop. *Leading growers know this . . . so do County Agents, State Agricultural Colleges and the U. S. Department of Agriculture.*

Third, it costs very little to inoculate your soy bean seed with a good commercial culture like NOD-O-GEN. Mostly, you get more "good hard" dollars in return for what you lay out for inoculation than for an equal amount spent on other farm practice. And inoculating seed is a simple job. *Leading growers know this . . . so do County Agents, State Agricultural Colleges and the U. S. Department of Agriculture.*

Fourth, NOD-O-GEN has a good record. It stands high in all inoculator inspection reports. *Leading growers know this . . . so do County Agents, State Agricultural Colleges and the U. S. Department of Agriculture.* You are invited to check NOD-O-GEN's record.

Recognized Bacteriologists

For over 25 years NOD-O-GEN has been made under the personal supervision of well recognized graduate bacteriologists. *No other commercial inoculator can show so long a continuous record.*

NOD-O-GEN Is Pre-Tested

Before every lot is released for shipment it is tested in laboratory and greenhouse to make sure it contains the right kind of bacteria . . . strong vigorous bacteria . . . in huge numbers. This is a NOD-O-GEN feature.

Colored Labels

For your convenience, and to avoid mistakes, every variety of NOD-O-GEN humus culture has an individual three colored label. The soy bean labels are red, yellow and blue. *No other inoculator offers this feature.*

Convenient Sizes

NOD-O-GEN humus cultures for soy beans are available in 1, 2, 5, 10, 25, and 30 bushel sizes

NOD-O-GEN

The Pre-tested Inoculator

?UT INOCULATING SOY BEANS

as sh in the illustration below. You can also NOD-O-GEN jelly or bottle type culture soy beans in 1, 2, and 5 bushel sizes.

See ur Dealer Today

The d nd for NOD-O-GEN has increased amazi In 1940 some late orders could not be fill See your dealer today to make sure your y will be available when needed.

INOCULATOR DIVISION

THE LBERT DICKINSON CO.

HICAGO, ILL. — EST. 1854

nerica's Largest Selling
o plete Inoculator Line

Soybeans . . . and People

● *One of the most interesting features of Baltimore and Ohio's Soybean Special was the cooking schools conducted by Mrs. Aneta Beadle Vogler, shown here stirring up muffin batter, one of three recipes prepared at each session of the cooking school. In the background at right is her assistant, Miss Mary Mowry. In the inset is Lester J. Miller, "testing" one of the muffins. Said Miller, as he posed for the photographer, "This is one way of getting in on the muffins, anyway." Mrs. Vogler and Miss Mowry hail from Indianapolis, Ind., while Miller is agricultural agent for the B. and O. railroad at Columbus, Ohio.* *For a more detailed story and more pictures of The Soybean Special, see page 4.*

Want To Plant Soybeans In Your Home Garden? Here's How

A WELL-NIGH universally adaptable food crop, the vegetable-type soybean, is finding its way into home gardens and commercial canneries.

Reports received from 810 persons at the Illinois Agricultural Experiment Station following distribution of vegetable-type soybean seed samples in the spring of 1939 indicated successful production from Maine to the Pacific Coast, and from near sea level to an altitude of 8,000 feet.

Seventy percent of those reporting success in production of the crop were well pleased with the table quality of the soybeans, and a great many were extremely enthusiastic about them. More than 78 percent of the growers reported that they were saving seed for subsequent planting.

Because of the warranted and widespread interest in vegetable soybeans, *The Digest* presents instructions for planting and cultivating soybeans in the home garden. A table of desirable varieties is also included, classified according to length of growing season required.

Vegetable soybeans respond well to methods of culture generally applicable to the field type soybean as produced in the corn belt. Shallower and thinner planting is sometimes advisable, however, with more careful attention to cultivation both before and after the plants are up.

The main crop should be planted at or shortly following corn planting time. Earlier and later plantings at 2-week intervals may be made, but date of maturity will not be advanced nearly as many days as the date of planting. At Urbana, Ill., it was found that plantings from April 12 to June 24 could be employed, with May 15 probably the best date for all varieties. The Ohio Agricultural Experiment Station recommends planting as soon after May 1 as a good seedbed can be prepared.

A well-prepared seedbed is essential. The land should be plowed or spaded either in the fall or early in the spring, with sufficient cultivation in the spring to kill the weeds and keep the ground in a friable condition.

Rows 3 feet apart will allow sufficient room for harvesting in the green stage, as well as permitting thorough cultivation. However, distances of 2 feet to 42 inches are satisfactory, and choice of distance between rows can best be made to fit the planting and cultivating equipment available. A rate of planting that will place the seeds from 1 1-3 to 1½ inches apart in the row is recommended where an ample supply of seed is available. If only a small supply is available, spacing the seeds from 3 to 4 inches apart will give a higher production per plant.

One-and-a-half to 2 inches has proven to be a satisfactory depth at Urbana, but if heavy rains pack and crust the soil before the beans are up, the crust should be broken with a rotary hoe, or in small home gardens, with a hoe or garden cultivator. The Ohio Station recommends a depth of ½ to 1 inch.

A regular garden seed drill can be adjusted easily to give correct rate of planting, or the beans may be planted by hand. For larger areas, a beet-and-bean drill, a grain drill with part of the holes stopped or an ordinary corn planter will give good results.

Inoculants prepared for field soybeans will be effective on vegetable-type soybeans, and on poorer soils usually will increase yields substantially, especially in gardens where soybeans have never been grown before. In good soil and in a favorable season, however, vegetable-type soybeans generally produce satisfactory crops without inoculation. *Only inoculants especially prepared for soybeans should be used, as pea, clover or alfalfa inoculants are ineffective on soybeans.*

—sbd—

SOME STANDARD VARIETIES

(Time required to mature will vary considerably from one region to another.)

Very early—90-100 days to edible maturity:
- Giant Green

Early—95 to 115 days to edible maturity:
- Bansei
- Fuji
- Waseda

Midseason—100 to 120 days to edible maturity:
- Hokkaido
- Willomi
- Jogun
- Aoda

Late—105 to 125 days to edible maturity:
- Illington
- Imperial
- Funk Delicious
- Emperor
- Higan

Ohio Station Host at Second Annual Conference of Processors, Agronomists

By H. H. Heenan, Soya Processing Company, Wooster, Ohio

PROCESSORS, agronomists and research men of Ohio and vicinity held their second annual soybean conference March 12 at the Ohio Agricultural Experiment Station at Wooster.

Dr. R. D. Lewis, chairman of the department of agronomy at Ohio State University, introduced those contributing to the development of the soybean and gave a survey of the problems as seen by research and extension agronomists. He emphasized the need of fitting soybeans into crop rotations which will replace soil depleting crops such as wheat, corn, and oats, rather than sod crops such as clovers, grasses and alfalfa.

The use of earlier maturing varieties, especially for northern Ohio, was recommended in order to assure ample time for maturing and harvesting. In many areas early maturing varieties permit planting of wheat and rye following harvest of the beans, making use of the land and affording a cover crop over the winter months.

The uses of the soybean oil and meal remain about the same as in previous years, the oil going into shortening and soap channels and approximately 95 percent of the meal being used as stock feed. The use of soybean meal, it was stated, makes an ideal carrier or mixing material for the more concentrated chemicals for commercial fertilizers, as the meal itself analyzes about 7-8-2.5.

Soybean processors have suffered heavy losses in the last 2 years, said Edward J. Dies, president of the National Soybean Processors Association. The war news after contracts were made on meal and oil and before the harvest of beans reacted against processors in 1939. The loss of exports for meal and oil with imports of South American cottonseed and linseed meal has created chaotic conditions in areas supplied from seaports. And the holding movement begun by the farmers in 1940 aroused the speculative mind of the public with the result that soybean prices have been too high in comparison with the prices of its products, meal and oil, thus destroying the processors' margin.

Dr. W. J. Morse, senior agronomist in charge of soybean investigations, division of forage crops and diseases, United States Department of Agriculture, noted that in the Orient the soybean has been a chief food item for over 5,000 years, used by rich and poor alike, chiefly to take the place of meats, milk and eggs because of the high protein and fat content.

Germany in late years has annually used 30 to 40 million bushels per year for human consumption and is at present obliged to use the Trans-Siberian railway as a means of getting beans and oil from Manchuria.

Dr. Edmund Secrest, director of the Ohio Agricultural Experiment Station, pointed out the wisdom of using lesser acres for more and better crops, thereby reducing the costs. This idea has changed farming in 150 years from a condition when 90 percent of the people were required to produce agricultural products to where only 20 percent are necessarily engaged in this endeavor today.

Dr. R. T. Milner, director of the United States Regional Soybean Industrial Products Laboratory, Urbana, Ill., outlined with slides the intense research devoted to soybean chemistry and mechanics tending to direct greater quantities to industrial uses.

—abd—

Sterne and Son Moves

Sterne and Son Company, oldest tenants of the 332 South LaSalle Street Building, have moved their offices to the Board of Trade Building. They had been located in the LaSalle Street Building in Chicago for 51 years.

Wanted . . MILLIONS OF POUNDS OF SOYBEAN OIL

● **In the light of expanding Soybean production and curtailed foreign markets, sales of Soybean Oil to Margarine manufacturers must be substantially increased. Today manufacturers of Margarine should be using many millions of pounds of Soybean Oil per year in addition to the 82,333,941 pounds used during the Federal Fiscal year ending June 30th, 1940.**

Consumers all over America want to buy Margarine made from Soybean Oil, but in many States they seldom get the chance. Discriminatory State and Federal Taxes hinder the sale of this Soybean Oil product. They deny American farm producers a legitimate market for their oils and fats and milk. These taxes are unfair to the growers of Soybean, corn and peanut oils and animal fats. They should be repealed. For years the Institute of Margarine Manufacturers fought to have them repealed. Now — with your help — the fight can be won.

Get in touch with your State — your Federal Legislators. Write to them. Urge them to get behind this campaign for repeal of these unfair, un-American Tax Laws.

NATIONAL MARGARINE INSTITUTE

OLD COLONY BUILDING • CHICAGO, ILLINOIS

Secretary Ponders On AAA Soybean Problem, Advises Standard Varieties

By J. B. EDMONDSON
Secretary-Treasurer, American Soybean Association

SOIL conservation officers in the central west have never felt entirely comfortable about the soybean crop. This unorthodox plant has so many quirks that it doesn't seem to fit in satisfactorily anywhere. It is a legume, but persists in being an annual; it is next to alfalfa in popularity as a hay crop and is second only to corn in value as a grain or seed crop; while it is a fixer of nitrogen in the soil, at the same time, it draws rather heavily on the mineral elements. So there you are!

At present, soybeans for grain are depleting and soybeans for hay are non-depleting. This arrangement gives thousands of farmers an opportunity to ride into compliance on the soybean hay wagon. But this has some objectionable features. Apparently, too many farmers are concerned more about complying for the cash payment than about conserving their soil fertility. Too many acres of soybean hay are being slashed off, without regard to the nature of the soil, the need of a cover crop, or the susceptibility to erosion. This situation is not setting too well with the soil conservation men and the threat of placing soybean hay in the depleting list is growing in intensity. A serious injustice to the soybean crop will be made in the event of this change, brought about through careless farming practices. Possibly, the plan of forcing improved methods by restrictions, would prove better than the contemplated one of penalizing the soybean crop.

ONE of the sound policies adopted by the management of the Van Wert Soybean Show that impressed me was the deliberate effort to discourage the growing of varieties unadapted to the community. This was accomplished by including only standard varieties in the premium list and by confining the sweepstakes class to the recommended varieties in this group. A thought or two about the soybean variety situation should emphasize the wisdom of this precaution.

There are hundreds of varieties of all descriptions in this country. In addition, every field, regardless of how pure the seed may be, has freak plants that often possess distinctly different varietal characteristics. The interesting possibility of originating a new strain or variety through the selection and multiplication of one of these plants accounts for many more kinds of soybeans. In fact, most of the so-called "new" varieties that periodically break into public note are nothing but pick-ups, taken from fields of the old standard varieties. Any farmer paying a fabulous price for a few seed beans of this unknown sort is taking a long, long chance; for in most cases, they prove even inferior in performance to the common varieties grown in the community.

The point is that the careful soybean grower should not gamble with varieties; he should stick pretty closely to the standard kinds grown successfully in the community. Any one who is tempted to get rich quickly by investing in new and untried varieties, whatever the claims for them may be, might save money and disappointment by first finding out what the boys at the experiment stations have learned about the particular variety. Their information in such cases is oftentimes quite illuminating.

The continuous effort to develop better soybean varieties is by all means commendable; but new varieties do not necessarily mean better varieties. Only a period of rigid testing can determine their superior qualities.

CERTIFICATE OF ANALYSIS

Each carload of Staley's Soybean Oil Meal is carefully sampled and examined by experts in the Staley Laboratory.

A certificate of actual analysis for each carload guarantees to the buyer what he is receiving in percentages of fat, protein, etc.

The Staley Customer NEVER GUESSES-He Knows!

FEED DIVISION

DECATUR, ILLINOIS A. E. STALEY MFG. COMPANY PAINESVILLE, OHIO

Brazil Tests Tung Groves To Replace Idle Acres of Old Coffee Plantations

TUNG groves may partially replace coffee plantations in Brazil, according to the Tung Oil Monthly of the United States Department of Commerce. A report from the American embassy in Rio de Janeiro states that the tung industry in Brazil had its beginning some 10 years ago, and was the result of attempts by coffee planters to find a crop which would supplement their declining incomes.

Although the industry is still going through a period of trial and experimentation, 500,000 tung trees have been planted in the state of Sao Paulo, and 150,000 have reached the age of production.

Information from planters indicates that some of the groves are commercially successful, while others have been failures. No data relating to acreage and actual production of tung nuts or oil are available, however.

The development of the industry in Brazil parallels that of the earlier American industry, and has had to contend with a similar general lack of knowledge regarding the necessary types of soil, drainage and rainfall.

The Sao Paulo Institute of Agriculture, however, is attempting to solve these problems, and is endeavoring to develop a standardized tree of maximum oil yield. The tung tree suffers considerably from the strong winds prevalent in certain sections of the state, and studies are also being made of wind-breaks.

Imports of tung oil into the United States dropped to 455,560 pounds in November, compared to 4,414,004 pounds in October, and 3,097,927 in November of 1939.

Difficulty in obtaining tung oil from the Orient has greatly stimulated interest in a quick-drying fraction of soybean oil and methods have been developed for separating such a fraction for use in paints, lacquers and varnishes requiring a quick-drying property.

Two Bills to Repeal Federal Margarine Tax

TWO identical bills (HR 3754 and HR 3753) to repeal the special tax on retail dealers in margarine have been introduced in Congress by Congressmen H. D. Fulmer and H. D. Cooley. Both bills have been referred to the House Committee on Agriculture, of which Congressman Fulmer is chairman and Congressman Cooley is a member.

Enactment of these bills should prove highly beneficial to the soybean industry, says Edward J. Dies, president of the National Soybean Processors Association. Margarine provided an outlet for 16.2 percent of all soybean oil produced in the United States in 1940.

Letters of approval may be addressed either to Fulmer or Cooley, or to any of the following members of the committee: Wall Doxey, Mississippi; John W. Flanagan, Jr., Virginia; Harry P. Beam, Illinois; Richard M. Kleberg, Texas; Walter M. Pierce, Oregon; Frank E. Hook, Michigan; Harry B. Coffee, Nebraska; Orville Zimmerman, Missouri; Stephen Pace, Georgia; Clifford R. Hope, Kansas; J. Roland Kinzer, Pennsylvania; Fred C. Gilchrist, Iowa; August H. Andresen, Minnesota; Anton H. Johnson, Illinois; Reid F. Murray, Wisconsin; Cliff Clevenger, Ohio; Samuel W. King, Hawaii; and Bolivar Pagan, Puerto Rico.

Address letters to members at "House Office Building, Washington, D. C."

—abd—

Washington News states President Roosevelt included coconut oil, copra, fatty acids produced from vegetable oils, palm kernel oil and palm kernels among additional articles placed under the export license control system, effective March 10.

"...If We Haven't Met..."

Of all who see his picture above, those who recognize Sam D. Hollett, manager of the Swift soybean mill at Fostoria, Ohio, will surely outnumber those who do not. That's not surprising, in view of Mr. Hollett's 27 years' background with the Swift organization, and his wide acquaintance among midwest producers.

The Swift Fostoria mill, with its crushing capacity of 800,000 bushels, its storage capacity of 450,000 bushels, and its most modern equipment for producing soybean oil and Swift's 43% Soybean Oil Meal, is decidedly worth a visit.

Those who know Mr. Hollett know how welcome they are at the plant. As for the others, Mr. Hollett's message is: "If we haven't met, let's get together soon!"

Swift & Company

Soybean Oil Is Most Versatile Of All, 1940 Factory Consumption Figures Show

Factory consumption of soybean oil reached 431,641,000 pounds in 1940, according to Bureau of Census reports. It was the fourth most important oil used industrially in the United States, ranking behind cottonseed oil, inedible tallow and coconut oil. Total factory consumption of major oils and fats in thousands of pounds in 1941 was as follows:

Cottonseed oil	1,279,960
Tallow, inedible	885,685
Coconut oil	528,203
Soybean oil	431,641
Linseed oil	386,225
Grease	356,513
Fish oils	179,515
Palm oil	157,213
Eight leading fats and oils.	4,204,955
Total, all fats and oils	4,737,585

While soybean oil is not the most important oil in any single product, it is one of the most versatile oils of all, the Bureau of Census figures show. Major outlets for soybean oil with thousands of pounds used, and percent of total oils used represented by soybean oil, were:

Shortening, 17.7 percent	212,317
Margarine, 34 percent	87,106
Other edible products, 8 percent	39,980
Paint and varnish, 6.8 percent	29,828
Soap, 1 percent	17,612
Linoleum and oilcloth, 6.5 percent	7,254
Printing inks, .4 percent	82
Miscellaneous	16,538

Soybean oil is surpassed by cottonseed oil in use in the edible fields, while linseed is still the major oil in paints and varnishes.

—sbd—

Watch Germination of Beans Hit by Storm

The harvesting of beans in Northern Illinois was a very catchy business this last season. November 11, 1940, did much damage to beans as to all other late crops. Probably all the beans harvested prior to this date were of good marketable value and, when properly stored, of sufficient quality for seed purposes. When purchasing seed for 1941 planting season, one should be very careful with those beans harvested after this date.

The greatest drawback to beans for seed is the relatively short season for threshing. So few really dry days are available during many fall seasons that many farmers have been discouraged in trying to raise them for seed. In years past many varieties were not early maturing enough to really mature and dry before the bad weather season began. By persistance and faith in the new crop, new varieties and old have become fairly well adapted to the localities; so now we are much better fitted with seed varieties.

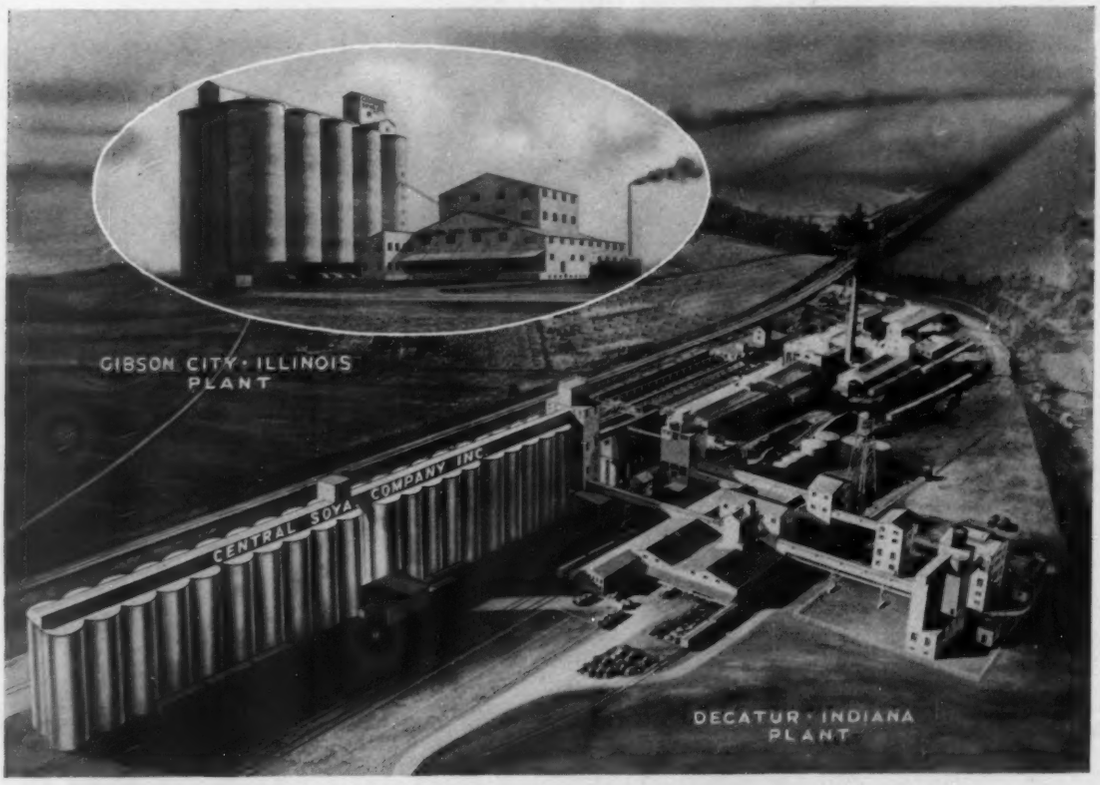
Beans Still in Field

During November and December, a great many acres in our locality were harvested when the beans contained a high percentage of moisture and damaged beans. Even at this late date in March, I can still count several fields of beans not harvested. Two lines of action seem to be open to improve upon this situation in years to come. One is a larger number of combines to get the job done earlier, the other that earlier and, if possible, heavier producing selections be made.

To make these improvements is largely the responsibility of experiment stations and seedsmen, but I should like to point out that the way is not closed and that many producers have the opportunity to work along these lines and can no doubt add much to the industry by so doing.—Abner R. Thomas, Kendall County, Ill., Correspondent.

—sbd—

Illinois farm stocks of soybeans April 1 amounted to 10,893,000 bushels, the highest on record with exception of April 1, 1940, and represent 31 percent of the 1940 production, according to the Illinois Crop Reporting Service.



Central 41% Soybean Oil Meal
(Expeller)

★

Central Star Brand 44% Soybean Oil Meal
(Browned Extracted)

★

We provide a year-round market for your soybeans.

CENTRAL SOYA COMPANY, *Incorporated*

MILLS: DECATUR, IND., AND GIBSON CITY, ILL. **GENERAL OFFICES: FORT WAYNE, INDIANA**

Marketing Service Plans Discussions Of Proposed Soybean Grading Changes

THE Agricultural Marketing Service has under consideration a revision of the official grain standards of the United States for soybeans, which, if adopted, would become effective with the harvest of the 1941 crop. The principal changes involve moisture content and split soybeans as grading factors, and the adoption of a dockage system.

Public conferences on these changes will be held May 5 at 10 a. m. in Campbell Hall Auditorium, Ohio State University, Columbus; at 2 p. m. May 6 in the library of the Board of Trade, Indianapolis, Ind.; at 2 p. m. May 7 in the Decatur Club Building, 100 W. Prairie Street, Decatur, Ill.; at 2 p. m. May 9 in the assembly room of the Chamber of Commerce, Cedar Rapids, Iowa.

May Write Suggestions

Growers, dealers, processors and others interested in the proposed changes are invited to be present at these meetings and to express their views on the proposals. Those who are unable to attend the conferences may present their suggestions or recommendations in writing to the Agricultural Marketing Service, Washington, D. C., not later than May 15. Copies of the proposed revised standards for soybeans may be obtained from the Agricultural Marketing Service, Washington, D. C., or from the grain and seed field offices of the Service.

The present soybean standards have been in effect under the Grain Standards Act since Nov. 20, 1940, and had been in effect as permissive standards for 5 years prior to that date. Suggestions for changes in the standards have been made from time to time by persons engaged in producing, marketing, inspecting and processing soybeans. It is believed that the revisions as proposed would provide a more equitable distribution of soybeans within the respective grades.

The proposed standards would designate five classes: yellow soybeans, Class I; green soybeans, Class II; brown soybeans, Class III; black soybeans, Class IV; and mixed soybeans, Class V. Classes I and II could not include more than 10 percent of soybeans of other colors, but could include not more than 5 percent of brown, black and/or bicolored soybeans, either singly or in any combination. Brown and black soybeans could include not more than 10 percent of soybeans of other colors.

The standards now in effect prescribe maximum moisture specifications for grades 1, 2 and 3 at 15, 15 and 16.5 percent respectively. Under the proposed plan the maximum moisture specification in grade No. 1 would be fixed at 13.5 percent, for No. 2 at 14.5 percent and No. 3 at 16 percent. The specification for grade No. 4 would remain 18 percent.

Under the proposed plan the maximum limits for splits would be 8 percent in No. 1, 15 percent in No. 2, 25 percent in No. 3, and 40 percent in No. 4; this compares to 1, 10, 20 and 30 percent of splits allowed in these respective grades under the present standards.

In the application of the present standards, foreign material is a factor which frequently determines the numerical grade notwithstanding the fact that much of the foreign material found in soybeans is readily removable. At the present time there is a custom in the trade to assess discounts by weight for foreign material present in soybeans when they are marketed.

These conditions seem to indicate the practicability of a dockage system for soybeans, similar to dockage systems now in use for several of the other grains. It is proposed to use a dockage sieve with smaller perforations (⅛-inch) than that now in use for the determination of foreign material, to the end that the loss of valuable material in the form of pieces of soybeans will be reduced to a minimum. The percentage of dockage would be calculated in whole percent and when less than 1 percent would not be stated.

Soybeans that are infested with live weevils or other insects injurious to stored grain would be graded and designated according to the grade requirements of the standards applicable to such soybeans if they were not weevily, but the word "weevily" would be made a part of the grade designation, as "No. 2 weevily." At present all weevily soybeans are placed in the sample grade.

The accompanying table shows the proposed requirements for the different soybean grades.

GRADE REQUIREMENTS FOR YELLOW SOYBEANS, GREEN SOYBEANS, BROWN SOYBEANS, BLACK SOYBEANS, AND MIXED SOYBEANS

Grade No.	Minimum test weight per bushel	Maximum limits of —			
		Moisture	Splits	Damaged kernels (soybeans and other grains)	Foreign material other than dockage
	Pounds	Percent	Percent	Percent	Percent
1[1]	56	13.5	8	2	1
2[1]	54	14.5	15	4	2
3	52	16.0	25	7	4
4[2]	49	18.0	40	10	6
Sample grade	Sample grade shall include soybeans of any of the classes Yellow Soybeans, Green Soybeans, Brown Soybeans, Black Soybeans, or Mixed Soybeans, which do not come within the requirements of any of the grades from No. 1 to No. 4, inclusive; or which contain stones and/or cinders; or which are musty or sour or heating or hot; or which have any commercially objectionable foreign odor; or which are otherwise of distinctly low quality.				

[1] The soybeans in Grade No. 1 of each of the classes Yellow Soybeans and Green Soybeans may contain not more than 2 percent, and the soybeans in Grade No. 2 of each of these classes may contain not more than 3 percent of Black, Brown, or bicolored soybeans, singly or combined.

[2] Soybeans that are badly weathered or badly stained shall not be graded higher than No. 4.

INCREASE YOUR FARM PROFITS

» Feed SOYBEAN OILMEAL by preference, thus making a better market for your cash soybeans. . . . Try our CEDAR VALLEY BRAND 41% Protein Old Process Soybean Oilmeal — our prices are always in line. . . . We can give good service on both carlots and trucklots.

SOY BEAN PROCESSING COMPANY

WATERLOO, IOWA

Intended Acreage Drops 7 Percent

Farmers will plant 7 percent fewer acres of soybeans in 1941 than in 1940, according to March 1 intentions as estimated by the federal crop reporting service. Prospective acreage is 9,788,000 acres compared to 10,538,000 acres grown alone in 1940.

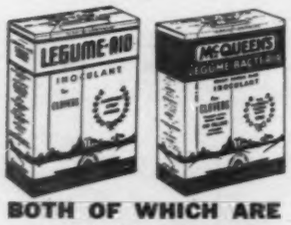
The decrease will come chiefly in the corn belt states of Illinois, Iowa, Indiana and Ohio, leading soybean producing states, where a 10 percent decline is expected. Increases in acreage are anticipated in the South. In spite of such a decline, total acreage probably will be larger than in any year previous to 1940. In all but two of the last 16 years soybeans have shown an increase in the acreage planted over the preceding year.

A reduction in the wheat and cotton crops has been recommended by Secretary of Agriculture Claude Wickard, appearing before the Senate Agricultural Committee, to prevent continued piling up of surpluses in those commodities. He favors a reduction of the cotton crop from 12,500,000 bales to 9 to 10 million bales, which would mean a cottonseed oil production of approximately 2,500,000 barrels, 838,000 barrels below last season's consumption.

ANOTHER STEP AHEAD

Appeals to Soybean Growers

AVAILABLE EXCLUSIVELY IN



BOTH OF WHICH ARE TOP QUALITY AND

Pliofilm PROTECTED

Legume Bacteria are perishable. They will not survive without adequate moisture. That's why Hermetically-Sealed *PLIOFILM Inner Bags are used. They are considered to be the "last word" in moisture-holding efficiency.

*Reg. T. M. Product Goodyear Tire & Rubber Co.

NEW 50 BU. SIZE SOYBEAN INOCULANT CONTAINS 10 INNER 5 BU. SIZE PACKAGES

Now, for the first time, Soybean Growers can buy BULK INOCULANT with MULTIPLE-INNER-PACKAGES . . . and at less than usual bulk prices!

No wonder this new idea appeals strongly to Soybean Growers because it's a big time saver on busy planting days.

No guesswork. No measuring. Always ready to use. Simply take one of the 5 Bu. Size Inner Packages for each 5 Bu. of Soys you wish to inoculate.

Once you use this multiple-package and enjoy its convenience, you won't want to accept a substitute.

Shows strong difference between uninoculated and inoculated Soybeans. Agri. Lab. Inc. inoculants were used.

If Not Available From Your Seed Dealer, Inquire Direct

ACCEPT NO SUBSTITUTE!

Produced, Tested, and Guaranteed by

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INOCULANTS
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GEN. OFFICES
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COLUMBUS, OHIO

ANOTHER STEP AHEAD

SEED DIRECTORY

Members of the American Soybean Association may list varieties of which they have seed for sale in the Seed Directory of The Soybean Digest. Up to three varieties may be listed throughout the seed trade season, January, February, March and April issues, for a charge of $1 to Association members. Additional varieties may be listed at the same rate, three for $1.

FIELD VARIETIES

Mukden

Tracy and Son Farms, Janesville, Wis.
Strayer Seed Farms, Hudson, Iowa.
Hilmer B. Schauer, R. 3, Hartford, Wis.
S. B. Simons and Sons, R. 1, Elkhorn, Wis.
T. Searcy, Independence, Iowa.

Wisconsin Manchu No. 2

Tracy and Son Farms, Janesville, Wis.
Henry Petesch, R. 1, Belgium, Wis.
Hilmer B. Schauer, R. 3, Hartford, Wis.
Leo Kultgen, R. 1, Box 207, Belgium, Wis.
Fred Scherwitz and Son, R. 3, Fort Atkinson, Wis.
S. B. Simons and Sons, R. 1, Elkhorn, Wis.

Richland

Strayer Seed Farms, Hudson, Iowa.
W. N. Woods and Son, R. 1, Maumee, Ohio (registered).
Frank J. Anderson, R. 5, Frankfort, Ind. (certified).

Habaro

Hilmer B. Schauer, R. 3, Hartford, Wis.

EDIBLE VARIETIES

Bansei

W. N. Woods and Son, R. 1, Maumee, O.
Farm Management, Inc., Irwin, Ohio.
Strayer Seed Farms, Hudson, Iowa.
"Soybean" Johnson, 1151 Claytonia Terrace, Richmond Heights, Mo.

Rokusun Lima Size

Tastee Soy Foods, 254 East Girard Ave., Philadelphia, Pa.

Kwikook Yellows

Tastee Soy Foods, 254 East Girard Ave., Philadelphia, Pa.

Jogun

Strayer Seed Farms, Hudson, Iowa.

Aoda

"Soybean" Johnson, 1151 Claytonia Terrace, Richmond Heights, Mo.

Three States Plan Soybean Yield Contests

Plans for soybean yield contests in Indiana, Illinois and Iowa are in progress. The Indiana Corn Growers' Association in cooperation with the Extension Service is sponsoring the tests in that state, the Illinois contest will be sponsored by the Illinois Farm Chemurgic Council and the Iowa contest by the Iowa Corn and Small Grain Growers' Association. Details of prizes, plot sizes and means of checking yields are now being worked out, and will be announced later.

—sbd—

Gradon (Duke) Swanson, for the past 2½ years employed as field representative of Western Mutual Fire Insurance Company, was selected as secretary of the Western Grain and Feed Association, Des Moines, Iowa, at a meeting of the board of directors March 4. He succeeds Dodd Theile who was forced to resign because of ill health.

Oil Imports Up Since February

Imports of vegetable oils began a sharp upturn in February and closed the month with a total 9,126,944 pounds above February of 1940, according to the United States Department of Commerce. Oilseeds showed a slight decline in imports, while exports of vegetable oils and oilseeds also showed declines from a year ago. The exception was coconut oil, which showed marked increases in both imports and exports, despite rising costs of ocean shipments because of a shortage of shipping space.

IMPORTS IN POUNDS

	Feb., 1941	Feb., 1940
Soybean oil	4,729	1,342,773
Cottonseed oil	None	5,620,124
Peanut Oil	None	416,648
Sesame oil	1,641	4,955
Coconut	32,206,900	26,240,415
Palm	24,645,960	14,155,705
Total oils	56,907,563	47,780,619
Oilseeds:		
Copra	32,541,329	44,898,550
Babassu nuts and kernels	10,263,551	6,055,695
Rapeseed	236,810	153,380
Sesame	1,051,144	951,473
Palm-nut kernels	4,504,545	47,780,619

EXPORTS IN POUNDS

Cottonseed oil	2,673,093	2,294,827
Soybean oil	1,432,851	1,661,000
Coconut oil	28,267,385	2,878,147
Lard	14,829,911	25,132,915
Soybeans	400	42,613,000

—sbd—

Farmers Reverse Marketing Habits

A reversal of the preceding five-year trend can be noted in the limited quantities of the 1940 soybean crop marketed by farmers during the fall months.

The percentage of the total crop marketed during the months of October, November and December increased from 58.7 percent in 1935 to 80.3 percent in 1939, according to data supplied by J. E. Barr, senior marketing specialist, grain and seed division, agricultural marketing service.

The data were based on carlot inspections by federally licensed inspectors at mills and terminal markets. Receipts at mills and terminal markets are believed to reflect rate of movement from country elevators, Mr. Barr says.

Following is a table showing percentage of total yearly receipts at mills and terminal markets received during the months of October, November and December of the years indicated:

	Oct.	*Nov.*	*Dec.*	*Total*
1935	24.3	16.6	17.8	58.7
1936	15.3	37.0	11.3	63.6
1937	30.0	29.6	5.0	64.6
1938	50.4	15.5	4.5	70.4
1939	51.0	22.0	7.3	80.3

This trend toward early marketing was noted in spite of the fact that prices rose an average of 25.4 cents from November to May during the 10 years 1930-39.

—sbd—

Manchurian perilla seed deliveries to the government monopoly continue slow, probably because farmers consider the price set too low. Although the production estimate of 41,000 short tons remains unchanged, the Dairen mills have not received over 16,500 tons, from which oil and cake production would be about 6,000 and 10,500 tons respectively. Although customs returns are not available, it is understood that at least 6,800 tons of seed have been shipped to Japan and 1,100 tons of oil to the United States. It is possible that small shipments of oil went to Germany. Total oil exports, including those already made, will be from 5,500 to 11,000 tons.

—sbd—

Margarine production in February showed a 4.68 percent decline from February 1940 figures, according to the National Margarine Institute monthly summary. February 1941 production was 28,102,717 pounds as compared with 29,482,079 in February 1940. Colored margarine production was higher, 337,416 pounds in February, 1941, as compared to 168,789 pounds in February, 1940.

Use of soybean oil declined slightly as a margarine ingredient, from 28 percent of total production in February, 1940, to 25 percent in February, 1941. Cottonseed oil was the chief oil replacing the soybean oil.

Market Street

We invite the readers of *The Soybean Digest* to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate: 5c per word per issue. Minimum insertion $1.00.

EDIBLE SOYBEANS—Bansei and Aoda. Purity 99.5 percent. Germination 96 percent. No samples. No sales under two-bushel lots. Write "Soybean" Johnson, 1151 Claytonia Terrace, Richmond Heights, Mo. Shipments from farm, northwestern Ohio. 4-2-p

EDIBLE SOYBEANS—For seed or table use, 50 bushels Kanro, 5 bushels Bansei. Harold Timm, Muscatine, Iowa. 6-1-p

Oil Exports Drop

Soybean oil exports from the United States during the first 4 months (October-January) of the 1940-41 marketing season were fairly well maintained at 5,254,000 pounds, the equivalent of about 650,000 bushels of beans. This compares with 7,152,000 pounds of oil exported in the same period in 1939-40, which was the largest on record. Distribution shifted considerably during this period with the exception of exports to Cuba and other Latin American countries, and Finland.

Exports of soybeans during the same 4 months amounted to only 82,000 bushels. This was anticipated, as practically all European markets were closed. Canada has been the principal buyer this season, with small quantities shipped to South American countries.

—sbd—

A resolution passed by the Georgia senate March 11 urged the Washington state legislature not to pass House Bill 215, which would place further restrictions on the utilization and marketing of margarine, says The Cotton and Cotton Oil Press. The resolution requested that instead Washington repeal its present tax of 15 cents per pound on margarine. A copy of the resolution was sent airmail to the governor of Washington.

THE VERY BEST IN *Soy-Paints*

O'BRIEN

SINCE 1875

O'Brien chemists, headed by Matt F. Taggart, have perfected and patented new, super-successful treatments for raw soybean oil. O'Brien Soy-Paints not only contain more soybean oil per gallon (45%); they are actually superior in quality to the best linseed oil paints. If you are interested in purchase for use or for resale, write the O'Brien Varnish Company, South Bend, Indiana.

Make More Money *from* Soybeans!

INOCULATE WITH NITRAGIN

Get full benefits from the soybeans you plant this spring. Have more bushels of beans to sell. It costs little to inoculate the seed with NITRAGIN. This inoculation often increases yields up to 50% — and more. It makes hay and feed up to 10 and 25% richer in protein, and helps build up the soil.

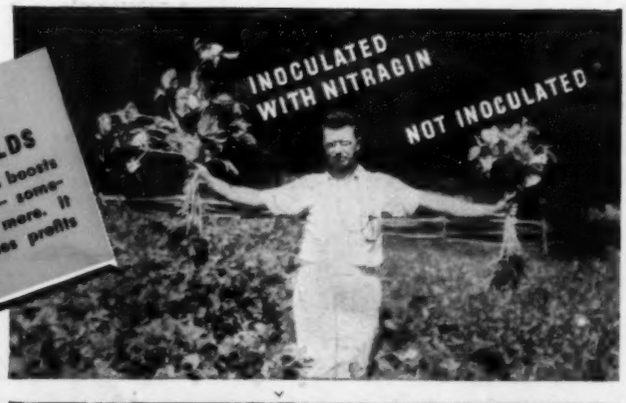
INOCULATE EVERY PLANTING OF SOYBEANS, ALFALFA, CLOVERS

Without good inoculation, soybeans grow by robbing the soil of nitrogen. With NITRAGIN, they take nitrogen from the air and store it in nodules on the plant roots. There it is available to promote richer growth and build up fertility.

USE NITRAGIN, THE OLDEST, MOST WIDELY USED INOCULANT

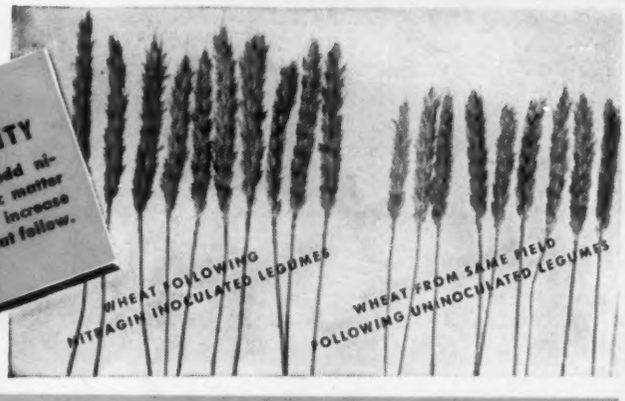
The experience of both practical farmers and agricultural authorities proves it pays to inoculate every planting of soybeans. When NITRAGIN costs so little, you can't afford to take chances by not inoculating or by using uncertain inoculation. NITRAGIN is the oldest and most widely used inoculant. Farmers have used it for over 42 years. Each can of NITRAGIN contains billions of legume bacteria from strains that have been scientifically tested and selected. NITRAGIN is sold by seed dealers.

THE NITRAGIN CO., INC.
3871 N. Booth St., Milwaukee, Wis.



Grow BIGGER YIELDS
Nitragin inoculation boosts soybean yields — sometimes 50% or more. It frequently doubles profits from the crop.

Get RICHER FEED
Fit your livestock for top prices. Feed hay from inoculated legumes; it's frequently 10% to 25% richer in protein and is leafier.



Build SOIL FERTILITY
Inoculation helps add nitrogen and organic matter to the soil to increase yields of crops that follow.

YOUR PROTECTION

The name **NITRAGIN** is a registered trademark put on every can. It identifies the only inoculants containing **NITRAGIN'S** highly effective strains of legume bacteria.

FREE LEGUME BOOK

You can profit by Nitragin's new book. All about legumes and illustrated, it tells how to grow better soybeans, alfalfa, clovers, etc. for cash, feed and soil building. Copy free to farmers. Also get free copy of Soybean Bulletin.